16. **(Thrice Amended)** A method of preparing an antimicrobial protein, said method comprising;

a) identifying in a known sequence or designing an amino acid sequence which forms a helix-turn-helix structure;

b) substituting individual residues in said amino acid sequence to achieve a sequence having the same distribution of positively charged residues and cysteine residues as the distribution found in a protein having a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and SEQ ID NO:5;

c) synthesizing chemically or expressing by recombinant DNA techniques in liquid culture an antimicrobial protein comprising said substituted amino acid sequence; and

d) isolating said antimicrobial protein.

17. **(Amended)** The protein fragment of Claim 1, wherein said protein fragment is a polypeptide containing a relative cysteine and tyrosine or phenylalanine spacing of Z-2X-C-3X-C-(10-12)X-C-3X-C-3X-Z (SEQ ID NOS:34-36) wherein X is any amino acid residue, and C is cysteine, and Z is tyrosine or phenylalanine.

20. **(Amended)** The protein fragment of Claim 1 which is truncated, wherein said truncated protein fragment retains the antimicrobial activity of the nontruncated protein fragment.

34. **(Amended)** A method of inhibiting microbial infestation of a plant, the method comprising; treating said plant with an effective amount of the composition according to claim 11 for a period sufficient to inhibit microbial infestation of the plant.

Please add the following claim

42. The method of Claim 16 further comprising testing the antimicrobial protein for antimicrobial activity.

REMARKS

The claims have been amended to more precisely claim the invention. Claim 16 has been amended to remove the phrase "using a computer modeling program" in response to the rejection under 35 U.S.C. §112. Claims 1, 3, 13, 16-17, 20, and 34 have been amended. Claim 42 has been added. Support for amended Claim 16 can be found in the Specification at page 10, line 4 to page 11, line 12, where detail is given of how a protein having the desired distribution of cysteine and positively charged residues could be prepared. It is implicit in this detail that the